

IN THE CLAIMS

1. (Twice Amended) A method of determining the contour of a substantially flat workpiece (~~20, 30, 50~~), comprising:

applying one or more reference markers to the workpiece (~~20, 30, 50~~) and to a workpiece support used in cooperation with the workpiece;

obtaining at least two overlapping digital photographs (~~35, 55a-d~~) of the workpiece (~~20, 30, 50~~) from different perspectives;

photogrammetrically processing the photographs (~~35, 55a-d~~) to produce a true-to-scale overall image (~~56~~) of the workpiece (~~20, 30, 50~~); and

determining the contour of the workpiece (~~20, 30, 50~~) from the true-to-scale overall image (~~56~~).

2. (Currently amended) The method according to claim 1, wherein said step of applying the reference markers comprises the step of applying a plurality of length scales (~~43~~) distributed over a surface of the workpiece.

3. (Currently amended) The method according to claim 1, wherein said step of applying the reference markers comprises the step of applying a plurality of position-markers (~~41, 51~~) distributed over a surface of the workpiece.

4. (Currently amended) The method according to claim 1, wherein the workpieces (~~20, 30, 50~~) are sheet metal parts of an automobile.

Claim 5 (Cancelled)

6. (Twice amended) The method according to claim 1, wherein the reference markers are plurality of length scales (~~43~~) or position-markers (~~41, 51~~) distributed over a surface of the workpiece.

7. (Twice amended) The method according to claim 1, wherein the workpiece support is dark in color in comparison with the workpiece (~~20, 30, 50~~).

8. (Currently amended) The method according to claim 1, further comprising the step of applying a contrasting coating to the workpiece (~~20, 30, 50~~).

Claim 9 (Cancelled)

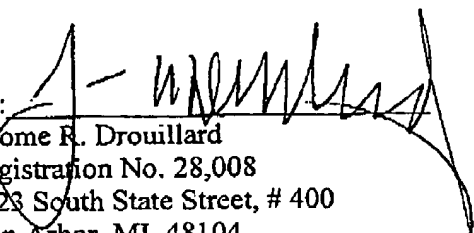
10. (Currently amended) The method according to claim 1, wherein said step of obtaining the overlapping digital photographs ~~(35, 55a-d)~~ comprises the steps of:
using a digital camera to record the overlapping digital photographs ~~(35, 55a-d)~~, the digital camera having; and
recording the overlapping digital photographs ~~(35, 55a-d)~~ from perspectives with substantially mutually perpendicularly disposed optical axes of the digital camera ~~(21)~~.
11. (Currently amended) The method according to claim 1, further comprising the step of rectifying each of the overlapping digital photographs ~~(35, 55a-d)~~ such that image planes of the photographs and workpiece are transformed onto each other.
12. (Currently amended) The method according to claim 1, wherein the contour of the workpiece ~~(20, 30, 50)~~ is a polygon.
13. (Previously presented) A method of establishing a form die for cutting sheet metal parts, comprising:
producing a prototype of the form die;
cutting a test sheet with the prototype form die;
determining the contour of the test sheet using the method of claim 1;
comparing the contour of the test sheet to a reference contour; and
adjusting the shape of a subsequent prototype form die based on the comparison of the test sheet contour to the reference contour.
14. (Twice amended) An apparatus for determining the contour of a substantially flat workpiece ~~(20, 30, 50)~~, comprising:
one or more reference markers for application to the workpiece;
a workpiece support having at least some of said references disposed thereon;
a digital camera ~~(21)~~ for recording digital, electronically stored photographs ~~(35, 55a-d)~~, of the workpiece ~~(20, 30, 50)~~; and
a data processing unit for photogrammetrically processing the stored photographs ~~(35, 55a-d)~~, for producing a true-to-scale overall image ~~(56)~~ of the workpiece ~~(20, 30, 50)~~ therefrom and for determining the contour of the workpiece ~~(20, 30, 50)~~ from the true-to-scale overall image.

15. (Currently amended) The apparatus according to claim 14, wherein the reference markers are position-markers (41, 51).

16. (Currently amended) the apparatus according to claim 14, wherein the reference marks are length scales (43).

17. (Cancelled)

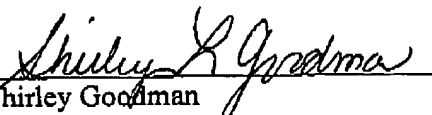
Dykema Gossett PLLC

By: 
Jerome R. Drouillard
Registration No. 28,008
2723 South State Street, # 400
Ann Arbor, MI. 48104
(734) 214-7670

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CERTIFICATE OF MAILING

I hereby certify that the enclosed Amendment is being faxed via (703) 872-9306 to Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 19th day of January, 2005.


Shirley Goodman

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